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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,216	02/10/2005	Mubarik Mahmood Chowdhry	265070US0PCT	6422

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

LEE, RIP A

ART UNIT PAPER NUMBER

1713

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/524,216

Applicant(s)

CHOWDHRY ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02-10-2005</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 2, and 4-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen *et al.* (WO 01/44325).

Kristen *et al.* discloses methods of emulsion polymerization of olefins with a group 7-10 metal complex having general structure (Ib), wherein radicals  $R^4$  to  $R^9$  contain an electron withdrawing group X, such as  $-\text{SO}_3^-$ . An activator may also be present. The resulting polyolefin dispersions are useful as a paper/paint coating, paper sizing, molded articles, textile and leather applications, coatings for underside of carpets and pharmaceutical applications (see abstract). Monomers and corresponding polyolefin types are disclosed on page 8. In particular, copolymerization of 1-olefins, such as ethylene, with styrene is contemplated (lines 29-31). Anionic, cationic, and nonionic emulsifiers are disclosed on page 29. Useful solvents are disclosed on page 28, lines 28-30. Substituents  $R^4$  to  $R^7$  are an  $\text{C}_6\text{-C}_{14}$  aryl group substituted with electron withdrawing group X or halogen (page 2, lines 43-45), and  $R^8$  and  $R^9$  are an  $\text{C}_6\text{-C}_{14}$

aryl group substituted with group X (page 3, lines 12-14). One skilled in the art would find in the text that an example of such a substituent is *p*-benzosulfonate,  $-\text{C}_6\text{H}_4\text{SO}_3^-$  (page 11, line 13). Although the examples do not show metal complexes containing this substituent, it would have been obvious to one having ordinary skill in the art to make such a compound because the inventors indicate that this type of compound is useful for the practice of the invention. Therefore, it would have been obvious to one having ordinary skill in the art to arrive at the method of making an aqueous polymer dispersion using a metal complex containing a *p*-benzosulfonate substituent, and he would have expected such a process to work equally well.

#### ***Allowable Subject Matter***

4. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Use of complexes containing the substituent described in the claim is neither taught nor fairly suggested in the disclosure of Kristen *et al.* One of ordinary skill in the art would not have found it obvious to arrive at the subject matter of the claim based on the general teachings of the patent.

#### ***Information Disclosure Statement***

5. The reference, WO 98/42664 has been cited in an international search report as a "X" reference. Transition metal complexes contain the requisite electron withdrawing groups, however, polymerization does not occur in an aqueous medium, as recited in the instant claims. In fact, the prior art teaches that when the Lewis basic additive is water, it should be used in limited amounts. As shown in Table 6, 0.1 mL (0.1 wt %) of water is present in 90 mL of toluene. Therefore, the examiner does not consider such a solvent system to qualify as "aqueous medium."


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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April 21, 2006

  
DAVID W. WU  
ASSISTANT PATENT EXAMINER  
TECHNOLOGY CENTER 1700